the perspective of its users. Therefore, the study aims to evaluate the acceptability and usability of SAKHI among healthcare providers.

**Methods** SAKHI Manipal is a secure, portable, standalone mobile-based device equipped with an algorithm based on deep learning to instantaneously analyse and interpret uterine cervix images for the presence of Cervical Intraepithelial Lesions after the application of acetic acid. The research group at Manipal Academy of Higher Education, Manipal, India, developed an Innovative device for resource-constrained settings. The field testing of the device is in progress in the PRESCRIP-TEC (Prevention and Screening Innovation Project Towards Elimination of Cervical Cancer) project as a triage test for HPV Positive women. The 40 healthcare professionals of tertiary hospitals were trained to use the device during the Visual Inspection with acetic acid (VIA) test, and their perspective as users of the SAKHI Manipal device was assessed using System Usability Scale (SUS).

**Results** Of all device usability survey responses, 32.5% responded device was ‘Excellent’ (SUS score >80.3), 42.5% felt it was ‘Good’ (SUS 68–80.3) and would recommend it further, and 25% stated that the device was ‘Ok’ (SUS 68).

Overall, 91.9% of the user surveyed agreed that the device is helpful during the VIA procedure.

**Conclusion/Implications** The study shows that the device was acceptable and usable by healthcare providers.

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**EP052/#1533 CERVICAL CANCER AND HPV VACCINATION: LESSONS LEARNT FROM A FOCUS GROUP DISCUSSION**

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**Introduction** Cervical cancer is the most common gynecological malignancy in Nigeria. HPV vaccines are about to be rolled out for young girls aged 9–14 years in Nigeria. The key issue remains, how to deal with vaccine hesitancy and ensure adequate uptake. This study aims to assess the awareness level of Cervical cancer and HPV vaccination, as well as attitude towards Vaccine uptake.

**Methods** A Focus Group Discussion was held with a representative sample of 100 Nigerian women aged 35–55 years, using a guide to assess their knowledge of Cervical cancer, HPV Vaccination, and willingness to consent to the uptake of vaccine by their young girls aged 9–14 years. Transcribed data was analyzed by Coding the text.

**Results** Only 10 women had prior knowledge of Cervical Cancer, none of the women had ever undergone a screening test and none of them had prior knowledge of the HPV Vaccine. After the Focus group discussion, more than half of the women displayed proper understanding of the disease and the need for Vaccination, 5 women from the Sample population displayed willingness to Champion the cause.

**Conclusion/Implications** From this study we can deduce that proper knowledge is key, an aware population can make health-conscious choices when given the right tools. It is however important to consider proper messaging and the education level of the Communities. Furthermore, pre-banking myths help to reduce the incidence of Vaccine hesitancy.

**EP053/#200**

**EARLY OUTCOMES AND TOXICITIES OF CHEMORADIATION THERAPY WITH VOLUMETRIC-MODULATED ARC THERAPY FOLLOWED BY 3D IMAGE-GUIDED BRACHYTHERAPY IN CERVICAL CANCER: VIETNAM NATIONAL CANCER HOSPITAL EXPERIENCE**

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**Introduction** To evaluate early outcomes and toxicities among locally advanced cervical cancer patients treated with concurrent chemoradiation using volumetric-modulated arc therapy (VMAT) followed by 3D image-guided brachytherapy (3D-IGBT). To evaluate early outcomes and toxicities among locally advanced cervical cancer patients treated with concurrent chemoradiation using volumetric-modulated arc therapy (VMAT) followed by 3D image-guided brachytherapy (3D-IGBT).

**Methods** A prospective, interventional study on 72 patients with 2018 International Federation of Gynecology and Obstetrics stage IB3-IIC2 disease treated with concurrent chemoradiation using VMAT followed by 3D-IGBT according to EMBRACE-II protocol. Treatment response, locoregional control, systemic control, and toxicities were primary endpoints in all patients.

**Results** Median of body volume received 43 Gy was 1589.1 cm³ (range 1214.8–2574.8). Median of high-risk clinical target (CTV-HR) volume was 18.8 cm³ (range 8.6–61.2), median dose to 90% of CTV-HR was 90.6 Gy (range 86.8–99.6). The mean of D2cc to bladder, rectum, and sigmoid were 75.8, 55.2, and 62.1 Gy, respectively. The complete response rate was 95.8%, and locoregional control and systemic control were 95.8% and 83.3%, respectively, at a median follow-up of 15 months (range 9–19). Grade ≥ 3 acute toxicities were observed in less than 10% of cases, except for neutropenia (accounted for 31.9%). Extended-field radiation increased the rate of nausea, fatigue, and thrombocytopenia. No grade ≥ 3 proctitis or cystitis was observed, but vaginal stenosis grade 3 was noted in 8.3% of patients.

**Conclusion/Implications** Concurrent chemoradiation therapy using VMAT and 3D-IGBT resulted in a high response rate and locoregional control with manageable toxicities in patients with locally advanced cervical cancer.

**EP059/#412**

**NRG ONCOLOGY CONSENSUS GUIDELINES FOR DELINEATION OF CLINICAL TARGET VOLUMES FOR INTENSITY-MODULATED RADIOTHERAPY FOR INTACT CERVICAL CANCER**

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**Introduction** Accurate target delineation is essential when using IMRT for intact cervical cancer. In 2011, RTOG published a
consensus guideline using MR images. The goal of the current project is to expand on the previous atlas by including CT-based contours without and with PET±MRI registrations, to add common and complex scenarios, and to ask about simulation and treatment planning techniques.

**Methods**
28 experts contoured 3 cases, first on a non-contrast CT simulation scan, then with registered diagnostic images. The cases included (1) FIGO IIIC1 with a bulky tumor and a vaginal metastasis, (2) FIGO IIB with calcified uterine fibromas, and (3) FIGO IIIC2 with large lymph nodes. The contours were analyzed for consistency using an expectation-maximization algorithm for simultaneous truth and performance level estimation (STAPLE) with kappa statistics as a measure of agreement.

**Results**
Analysis of the contours showed considerable agreement between experts in each of the cases with kappa statistics of 0.67–0.72. For each case, use of diagnostic PET±MRI was associated with an increase in volume. The largest increase was in the CTV primary for Case 2 (20% increase in average volume, 64% increase in STAPLE estimate volume), which may be due to variance in registration priorities. For the third case, 92.9% of participants increased their CTVs based on the addition of the PET scan.

**Conclusion/Implications**
Here we show the value as well as the challenges of using co-registered diagnostic imaging. The main areas of variance remain determining the superior extent of CTV coverage, coverage of the mesorectum, simulation and planning protocols.

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**EP060/#474 POTENTIAL ANTI-HUMAN PAPILLOMAVIRUS THERAPEUTICS: MECHANISM AND ACTION OF COMBINATION THERAPY IN CERVICAL CANCER CELLS**

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**Introduction**
Cervical cancer is the most common malignancy among women caused due to persistent high-risk human papillomavirus (HR-HPV) infection. The carcinogenesis of HPV is attributed to its early viral onco-proteins E6/E7, which increase cellular proliferation and survival mechanisms by interacting with cellular survival pathways including AKT/mTOR kinases, and activator protein-1 (AP-1; Jun/Fos) and E2F transcription factors. Cervical cancer cells become addicted to E6/E7 expression and undergo apoptosis when E6/E7 are disrupted. Previously, we demonstrated functional synergism between the HSP70-inhibitor SHetA2 and the CDK4/6-inhibitor palbociclib in cervical cancer. However, this synergism’s mechanism was not explored with respect to targeting HPV E6/E7 onco-proteins. Hence, the objective of this study was to evaluate the impact of SHetA2 and palbociclib alone,